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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,033	12/30/2000	Timothy R. Collier	42390P10501	9680

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EXAMINER

WOO, RICHARD SUKYOON

ART UNIT	PAPER NUMBER
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3639

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,033

Applicant(s)

COLLIER ET AL.

Examiner

Richard Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

- 1) The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3) Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 23, the recitation of "the method of claim 20" lacks antecedent basis and the Claim 20 is rather directed to the machine-readable medium.

Claim Rejections - 35 USC § 101

- 4) 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- 5) Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

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This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather,

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statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the instant application, there is no significant claim recitation of the data processing system or calculating computer to show the significant change in the data or for performing calculation operations.

Claim Rejections - 35 USC § 102

6) Claims 1-23, as far as Claim 23 is definite, are rejected under 35 U.S.C. 102(e) as being anticipated by Kanai (US 2001/0047313).

As for Claim 1, Kanai discloses a method comprising:

receiving information regarding an atomic distributed transaction, the atomic distributed transaction representing an aggregation of a plurality of discrete transactions for resource items that span a plurality of network (see Figs. 1-3);

placing a tentative hold on each of the plurality of resource items by causing a tentative hold record to be created and associated with each of the plurality of discrete transactions, the tentative holds operating in a non-mutually exclusive manner, thereby allowing the same resource item to be tentatively held by more than one transaction (see paragraphs [0132], [0189], [0213]); and

after successfully gaining the tentative holds on each of the plurality of resource items and receiving a confirmation regarding the atomic distributed transaction (see paragraphs [0207]-[0210]), attempting to direct the completion of the atomic distributed transaction by conventional means (see paragraphs [0199], [0213]).

As for Claim 2, Kanai further discloses the method, wherein said attempting to direct the completion of the atomic distributed transaction by conventional means comprises initiating conventional Two-Phase Commit (2PC) prepare and commit processing for each of the plurality of discrete transactions (see paragraphs [0199], [213]).

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As for Claim 3, Kanai further discloses the method, further comprising receiving a notification indicating one of the plurality of discrete transactions are no longer possible (paragraph [0198]).

As for Claim 4, Kanai further discloses the method, wherein one or more of the tentative hold records are stored at an intermediate server that is not within the enterprise offering the resource item (see Supra Figs. and paragraphs [0090]-[0091]).

As for Claim 5, Kanai further discloses the method, wherein the plurality of network resources comprise database systems of a plurality of different enterprises (see Supra paragraphs, including various hotel and airline enterprises).

As for Claim 6, Kanai discloses a method comprising:

receiving information regarding a distributed transaction from an originating application, the distributed transaction involving a plurality of items spanning a plurality of network resources (see Figs. 1-3); and

initiating a tentative-hold processing stage by requesting that a plurality of resource managers residing on one or more remote servers and participating in the distributed transaction each tentatively hold an item of the plurality of items involved in the distributed transaction and store call back information identifying a return communication path to the originating application, the tentative hold records operating in a non-mutually exclusive manner, thereby allowing items associated with the one or more remote servers to be tentatively held by more than one application (see paragraphs [0132], [0189], [0207]-[0210], [0213]).

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As for Claim 7, Kanai further discloses the method, wherein at least two of the remote servers are associated with different enterprises (see Supra Figs. and paragraphs [0115], [0116]).

As for Claim 8, Kanai further discloses the method, further comprising receiving a commitment corresponding to the distributed transaction from the originating application; and responsive to the commitment, initiating a two-phase commit processing stage by directing the resource managers to reserve the items during which the resource managers reserve the items and notifying, via corresponding call back information, other applications having a tentative hold on the same items that their respective tentative holds have been suspended (see paragraphs [0199], [0207]-[0210], [0213]).

As for Claim 9, Kanai discloses a method comprising:

receiving, from a first client, a first request associated with a first discrete transaction, the first request soliciting a non-mutually exclusive hold on a resource item; the resource item being part of a first atomic distributed transaction that spans a plurality of network resources (see Figs. 1-3);

maintaining a first non-mutually exclusive hold on the resource item until an exclusive lock is obtained on the resource item or for a predetermined amount of time, whichever occurs first, by causing a first tentative hold record to be created and associated with the resource item and initiating a first timeout associated with the their tentative hold record (see paragraphs [0195], [0201], [0231]);

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receiving, from a second client, a second request associated with a second discrete transaction, the second request soliciting a non-mutually exclusive hold on the resource item, the resource item being part of a second atomic distributed transaction (see Supra Figs. and the descriptions thereof);

maintaining a second non-mutually exclusive hold on the resource item until an exclusive lock is obtained on the resource item or for a predetermined amount of time, whichever occurs first, by causing a second tentative hold record to be created and associated with the resource item and initiating a second timeout associated with the second tentative hold record (see paragraphs [0195], [0201], [0231]);

receiving, from the first client, a third request associated with the first discrete transaction, the third request asking that completion of the first discrete transaction commence (see Supra finalizing step for the user, e.g. paragraph [0189]); and

responsive to the third request, suspending the second non-mutually exclusive hold and granting an exclusive lock on the resource item to the first discrete transaction (see Fig. 37 and the paragraph [0252]).

As for Claim 10, Kanai further discloses the method, wherein at least two network resources of the plurality of network resources are associated with different enterprises (see Figs. 1-3).

As for Claim 11, Kanai further discloses the method of claim, further comprising:

storing call back information associated with an application originating the second discrete transaction (paragraph [0172]); and

notifying the application regarding the suspension of the second non-mutually exclusive hold (paragraph [0253]).

As for Claim 12, Kanai further discloses the method, further comprising in response to a timeout on the exclusive lock, recommencing the second non-mutually exclusive hold on behalf of the second discrete transaction (paragraphs [0274]-[0275]).

As for Claim 13, Kanai discloses a distributed transaction processing system comprising:

a distributed transaction coordinator executing on a first client system, the distributed transaction coordinator to place non-mutually exclusive holds on each of a plurality of resource items associated with an atomic distributed transaction that spans a plurality of network resources and to commence completion of the atomic distributed transaction by obtaining exclusive locks on each of the plurality of resource items after non-mutually exclusive holds have been successfully granted on each of the plurality of resource items (see Figs. 1-3); and

a distributed transaction manager (11) executing on a server system communicatively coupled with a plurality of client systems including the first client system, the distributed transaction manager to maintain a plurality of non-mutually exclusive holds for each of a plurality of resource items associated with the server system and to grant only one exclusive lock per single resource item of the plurality of resource items at a given time in response to requests from distributed transaction coordinators (see Fig. 2).

As for Claim 14, Kanai further discloses the system, wherein the distributed transaction coordinator includes a Two-phase Commit transaction coordinator (see paragraphs [0213]).

As for Claim 15, Kanai further discloses the system, further comprising one or more Two-phase Commit resource managers communicatively coupled with the distributed transaction manager (see paragraphs [0213], [0222], [0225]).

As for Claim 16, Kanai discloses a machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a processor, cause the processor to:

receive information regarding an atomic distributed transaction, the atomic distributed transaction representing an aggregation of a plurality of discrete transactions for individual resource items that span a plurality of network resources (see Figs. 1-3);

place a tentative hold on each of the plurality of individual resource items by causing a tentative hold record to be created and associated with each of the plurality of discrete transactions, the tentative holds operating in a non-mutually exclusive manner, thereby allowing the same resource item to be tentatively held by more than one interested party (see paragraphs [0132], [0189], [0213]); and

after successfully gaining the tentative holds on each of the plurality of individual resource items and receiving a confirmation regarding the atomic distributed transaction (see paragraphs [0207]-[0210]), attempt to direct the completion of the atomic distributed transaction by conventional means (see paragraphs [0199], [0213]).

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As for Claim 17, Kanai further discloses the medium, wherein said attempt to direct the completion of the atomic distributed transaction by conventional means comprises initiating conventional Two-phase Commit (2PC) prepare and commit processing for each of the plurality of discrete transactions (see paragraphs [0213], [0222], [0225]).

As for Claim 18, Kanai further discloses the medium, wherein one or more of the tentative hold records are stored at an intermediate server that is not within the enterprise offering the resource item (see Supra Figs.).

As for Claim 19, Kanai further discloses the medium, wherein the plurality of network resources comprise database systems of a plurality of different enterprises (see Id.).

As for Claim 20, Kanai discloses a machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a processor, cause the processor to:

receive, from a first client, a first request associated with a first discrete transaction, the first request soliciting a non-mutually exclusive hold on a resource item; the resource item being part of a first atomic distributed transaction that spans a plurality of network resources (see Figs. 1-3);

maintain a first non-mutually exclusive hold on the resource item until an exclusive lock is obtained on the resource item or for a predetermined amount of time, whichever occurs first, by causing a first tentative hold record to be created and associated with the resource item and initiating a first timeout associated with the first tentative hold record (see paragraphs [0195], [0201], [0231]);

receive, from a second client, a second request associated with a second discrete transaction, the second request soliciting a non-mutually exclusive hold on the resource item, the resource item being part of a second atomic distributed transaction (see Supra Figs. and the descriptions thereof);

maintain a second non-mutually exclusive hold on the resource item until an exclusive lock is obtained on the resource item or for a predetermined amount of time, whichever occurs first, by causing a second tentative hold record to be created and associated with the resource item and initiating a second timeout associated with the second tentative hold record (see paragraphs [0195], [0201], [0231]);

receive, from the first client, a third request associated with the first discrete transaction, the third request asking that completion of the first discrete transaction commence (see Supra finalizing step for the user, e.g. paragraph [0189]); and

responsive to the third request, suspend the second non-mutually exclusive hold and granting an exclusive lock on the resource item to the first discrete transaction (see Fig. 37 and the paragraph [0252]).

As for Claim 21, Kanai further discloses the medium, wherein at least two network resources of the plurality of network resources are associated with different enterprise (see Supra Figs.).

As for Claim 22, Kanai further discloses the medium, wherein the sequences of instructions further include instructions which, when executed by the processor, cause the processor to:

store call back information associated with an application originating the second discrete transaction (paragraph [0172]); and

notify the application regarding the suspension of the second non-mutually exclusive hold (paragraph [0253]).

As for Claim 23, Kanai further discloses the medium of claim 20, wherein the sequences of instructions further include instructions which, when executed by the processor, cause the processor to recommence the second non-mutually exclusive hold on behalf of the second discrete transaction in response to a timeout on the exclusive lock (see paragraphs [0274]-[0275]).

Conclusion

7) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,442,552 is cited to show a method and apparatus for implementing three-tier client asynchronous transparency, including sending a request and a count from a client to a first application server of an application server group.

US 2002/0010604 is cited to show an automated Internet based interactive travel planning and reservation system to arrange for every aspect of the customer's travel.

US 2002/0069093 is cited to show a reservation system and method that begins with any reservation and uses interactive e-mail sales and marketing strategies to follow up on the initial reservation or sale.

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US 6,272,675 is cited to show an apparatus and method for automatically generating the code which enables a client application to initiate and participate in a transaction across multiple platforms.

US 6,275,843 is cited to show a system for processing multiple service requests within a global transaction by a single server application program instance.

US 5,680,610 is cited to show a method and system for testing two-phase commit and recovery scenarios in global transaction processing systems. After the recovery is complete, the databases are compared to the expected states according the recovery scenario.

EP 1,345,144 is cited to show a system for corporate travel planning, expense reporting and travel management including a reservation system, a relational database server system, and a travel planning, expense reporting and travel management system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Woo whose telephone number is 571-272-6813. The examiner can normally be reached on Monday-Friday from 8:30 AM -5:00 PM.

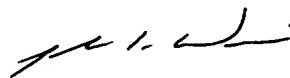
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Woo
Patent Examiner
Art Unit 3629
March 15, 2005



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